

What is claimed is:

1. An organic electro-luminescence (EL) device, comprising:

a first electrode formed on a substrate;

a second electrode formed to overlap said first electrode;

an organic EL layer located between said first electrode and said second electrode; and

a dielectric layer formed between said second electrode and said organic EL layer, wherein said dielectric layer contains an antioxidative material.

2. The organic EL device according to claim 1, wherein said antioxidative material includes organic material.

3. The organic EL device according to claim 1, wherein said antioxidative material includes metallic powder.

4. The organic EL device according to claim 1, wherein said antioxidative material includes organic material and metallic powder.

5. The organic EL device according to claim 4, wherein

said antioxidative material includes a mixture of 50 ~ 75 % of the organic material and 25 ~ 50 % of the metallic powder.

6. The organic EL device according to claim 2, wherein said organic material is at least one of a salt system compound, a CH_3COO^- compound, an aromatics amine system material, phenol derivatives and a phosphite system material.

7. The organic EL device according to claim 3, wherein said metallic powder is a metal with a low work function.

8. The organic EL device according to claim 3, wherein said metallic powder is at least one of Al, Li, Ca, Mg and Ba.

9. The organic EL device according to claim 1, wherein said dielectric layer has a thickness of approximately 10 ~ 80 Å.

10. The organic EL device according to claim 1, wherein said organic EL layer includes:

a hole injection layer formed on said first electrode;

a hole carrier layer formed on said hole injection layer;

a light-emitting layer formed on said hole carrier layer;

an electron carrier layer formed on said light-emitting layer; and

an electron injection layer formed on said electron carrier layer.

11. The organic EL device according to claim 1, wherein said first electrode is formed of at least one of an Indium Tin Oxide (ITO), a Tin Oxide (TO) and an Indium Zinc Oxide (IZO).

12. A flat panel display comprising:

a transparent substrate;

an organic electro-luminescence (EL) array formed on said transparent substrate, wherein said organic electro-luminescence (EL) array includes:

a first electrode formed on said transparent substrate;

a second electrode formed to overlap said first electrode;

an organic EL layer located between said first electrode and said second electrode; and

a dielectric layer formed between said second electrode and

said organic EL layer, wherein said dielectric layer contains an antioxidative material.

13. The flat panel display according to claim 12, wherein said antioxidative material includes a mixture of 50 ~ 75 % of organic material and 25 ~ 50 % of metallic powder.

14. The flat panel display according to claim 12, wherein said antioxidative material includes a mixture of organic material and metallic powder.

15. The flat panel display according to claim 14, wherein said organic EL array includes a thin film transistor array portion.

16. The flat panel display according to claim 14, wherein said organic material is at least one of a salt system compound, a CH_3COO^- compound, an aromatics amine system material, phenol derivatives and a phosphite system material.

17. The flat panel display according to claim 14, wherein said metallic powder is at least one of Al, Li, Ca, Mg and Ba.

18. The flat panel display according to claim 14, wherein said dielectric layer has a thickness of approximately 10 ~ 80 Å.

19. The organic EL device according to claim 14, wherein said organic EL layer includes:

a hole injection layer formed on said first electrode;

a hole carrier layer formed on said hole injection layer;

a light-emitting layer formed on said hole carrier layer;

an electron carrier layer formed on said light-emitting layer; and

an electron injection layer formed on said electron carrier layer.

20. The organic EL device according to claim 14, wherein said first electrode is formed of at least one of an Indium Tin Oxide (ITO), a Tin Oxide (TO) and an Indium Zinc Oxide (IZO).

21. A method of fabricating an organic electro-luminescence (EL) device, comprising:

forming a first electrode on a substrate;

forming an EL layer on the first electrode;

forming a dielectric layer on the EL layer; and

forming a second electrode on the dielectric layer, wherein the dielectric layer contains an antioxidative material.

22. The method of claim 21, wherein the antioxidative material includes a mixture of 50 ~ 75 % of an organic material and 25 ~ 50 % of an metallic powder.

23. The method of claim 22, wherein the organic material is at least one of a salt system compound, a CH_3COO^- compound, an aromatics amine system material, phenol derivatives and a phosphite system material.

24. The method of claim 22, wherein the metallic powder is at least one of Al, Li, Ca, Mg and Ba.

25. The method of claim 21, wherein said step of forming the EL layer includes:

forming a hole injection layer on the first electrode;

forming a hole carrier layer on the hole injection layer;

forming a light-emitting layer on the hole carrier layer;

forming an electron carrier layer on the light-emitting layer; and

forming an electron injection layer on the electron carrier layer.

26. The method of claim 21, wherein the dielectric layer has a thickness of approximately 10 ~ 80 Å.

27. The method of claim 21, wherein the first electrode is formed of at least one of an Indium Tin Oxide (ITO), a Tin Oxide (TO) and an Indium Zinc Oxide (IZO).